

**REMARKS**

Reconsideration and withdrawal of the restriction requirement and election of species are respectfully requested in view of the remarks herewith.

The December 23, 2004 Office Action called for restriction from among the following:

- I: Claims 1-3 and 13 are drawn to an isolated DNA molecule and host cell, classified in class 435, subclass 69.1;
- II: Claims 4-9 are drawn to a protein, classified in class 530, subclass 350;
- III: Claims 10-12 are drawn to an antibody, classified in class 530, subclass 387.1;
- IV: Claims 14 and 16 are drawn to a non-human animal whose gene function is deficient, classified in class 800, subclass 13;
- V: Claims 15 and 17 are drawn to a non-human animal that over-expresses the protein, classified in class 800, subclass 13+;
- VI: Claims 18-27, drawn to a method of screening an inhibitor or a promoter, classified in class 435, subclass 7.1.

Group I is elected, with traverse, for further prosecution in this application. Applicants reserve the right to file divisional applications to non-elected subject matter. Reconsideration and withdrawal of the restriction requirement are respectfully requested in view of the remarks herewith.

As a traverse, it is noted that the MPEP lists two criteria for a proper restriction requirement. First, the inventions must be independent or distinct. MPEP § 803. Second, searching the additional inventions must constitute an undue burden on the examiner if restriction is not required. *Id.* The MPEP directs the examiner to search and examine an entire application “[i]f the search and examination of an entire application can be made without serious burden, ...even though it includes claims to distinct or independent inventions.” *Id.*

The Office Action states that the nucleic acids of Group I are related to the protein of Group II by virtue of encoding same. It is respectfully submitted that any search for the compositions of the Group I claims will certainly encompass references for the compositions of the Group II claims. The two groups are inextricably linked in that the compositions of both groups are directed to proteins that control cell migration and cell death. Applicants believe that Group I (directed to a gene) and Group II (directed to a protein) should not be separated because such separation may contradict the idea of the PCT unity of invention. Furthermore, since

claims 13-15 depend from claim 4, it does not seem logical that claims 13-15 and claim 4 should be restricted into different groups. Applicants also respectfully point out that U.S. patents have issued with claims directed to both DNA and protein sequences. For example, claim 1 of U.S. Patent No. 6,531,296 is directed to a peptide and claim 2 is directed to an isolated DNA sequence encoding a peptide according to claim 1.

Therefore, it is respectfully submitted that it would not place an unnecessary burden on the Examiner to search and examine both groups together, as a search for the Group I compositions would necessarily include the Group II compositions.

The Office Action states that the nucleic acids of Group I are related to the antibody of Group III by virtue of the protein that is encoded by the nucleic acid and necessary for the production of the antibody. It is respectfully submitted that any search for the compositions of the Group I claims will certainly encompass references for the compositions of the Group III claims. The two groups are inextricably linked in that the compositions of both groups are directed to proteins that control cell migration and cell death. Therefore, it is respectfully submitted that it would not place an unnecessary burden on the Examiner to search and examine both groups together, as a search for the Group I compositions would necessarily include the Group III compositions.

The Office Action states that the proteins of Group II are related to the antibody of Group III by virtue of being the cognate antigen, necessary for the production of antibodies. It is respectfully submitted that any search for the compositions of the Group II claims will certainly encompass references for the compositions of the Group III claims. The two groups are inextricably linked in that the compositions of both groups are directed to the proteins that control cell migration and cell death. Therefore, it is respectfully submitted that it would not place an unnecessary burden on the Examiner to search and examine both groups together, as a search for the Group II compositions would necessarily include the Group III compositions.

The Office Action states that the proteins of Group II and the methods of screening an inhibitor or a promoter of Group VI are related as product and process of use. It is respectfully submitted that any search for the proteins of Group II will certainly encompass references for the methods of Group VI claims. The two groups are inextricably linked in that the proteins of Group II are used for the methods of Group VI. Therefore, it is respectfully submitted that it would not place an unnecessary burden on the Examiner to search and examine both groups

together, as a search for the Group II compositions would necessarily include the Group VI methods.

The Office Action states that Groups IV-V and VI are related as product and process of use. It is respectfully submitted that any search for the non-human animals of Groups IV-V will certainly encompass references for the methods of Group VI claims. The two groups are inextricably linked in that the animals of Groups IV-V are used for the methods of Group VI. Therefore, it is respectfully submitted that it would not place an unnecessary burden on the Examiner to search and examine the three groups together, as a search for the animals of Groups IV-V would necessarily include the Group VI methods.

In view of the above, reconsideration and withdrawal of the restriction requirement is respectfully requested. In the alternative, Applicants respectfully request the modification of the restriction requirement to join Groups I and II.

In summary, enforcing the present restriction requirement would result in inefficiencies and unnecessary expenditures by both the Applicants and the PTO, as well as extreme prejudice to Applicants (particularly in view of GATT, whereby a shortened patent term may result in any divisional applications filed). Restriction has not been shown to be proper, especially since it has been shown that the requisite showing of serious burden has not been made. Indeed, the search and examination of each Group would be likely to be co-extensive and, in any event, would involve such interrelated art that the search and examination of the entire application can be made without undue burden on the Examiner, especially as the claims of Groups I and IV and Groups II and III have identical classifications. All of the preceding, therefore, mitigate against restriction.

Consequently, reconsideration and withdrawal of the restriction requirement are respectfully requested.

**CONCLUSION**

In view of the remarks herein, reconsideration and withdrawal of the restriction requirement are requested.

Early and favorable consideration of the application on the merits, and early Allowance of the application are earnestly solicited.

Respectfully submitted,  
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